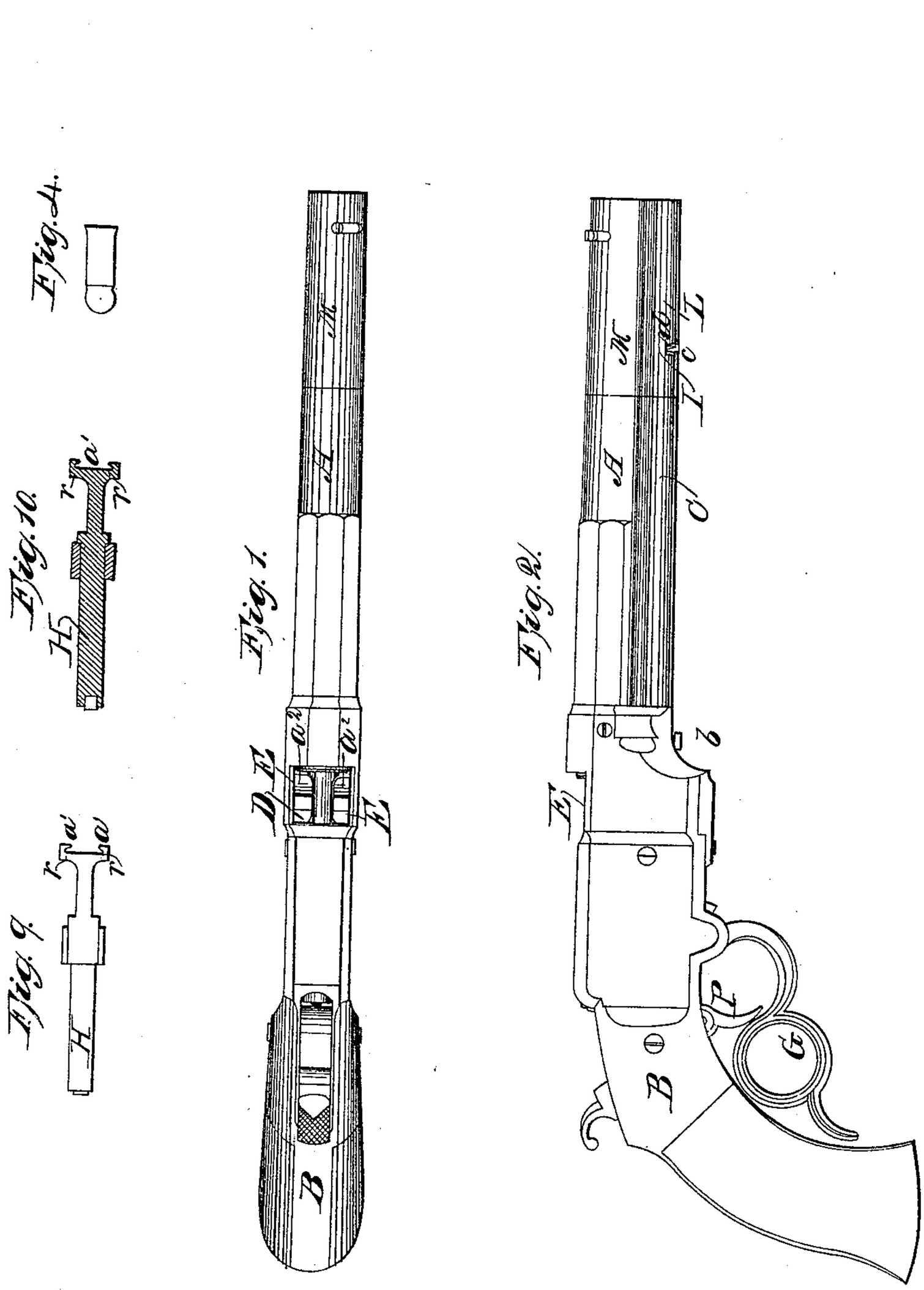
H. SMITH & D. B. WESSON. 2 Sheets—Sheet 1.

MAGAZINE FIREARM.

No. 10,535. Patented Feb. 14, 1854.



2 Sheets—Sheet 2.

H. SMITH & D. B. WESSON

MAGAZINE FIREARM.

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Fig. 6.

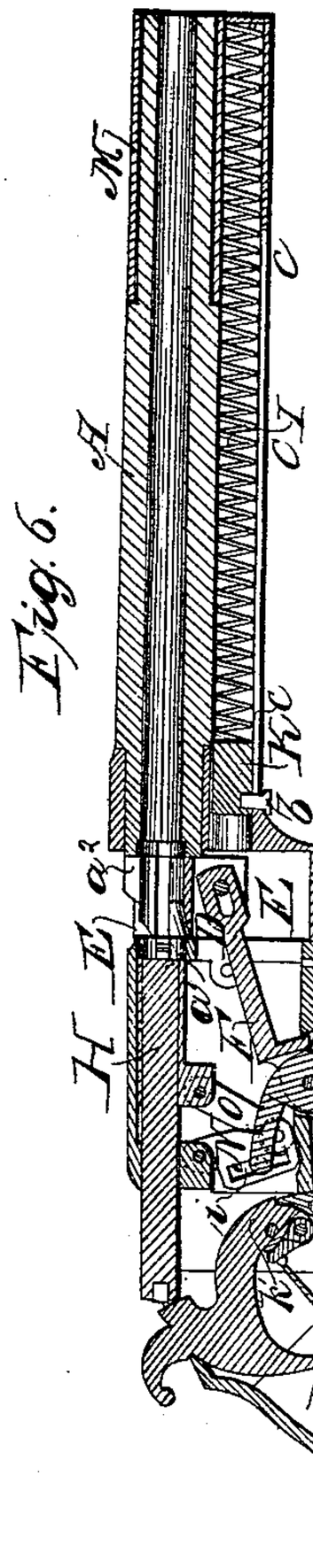

Fig. 8.

Fig. 7.

Fig. 3.

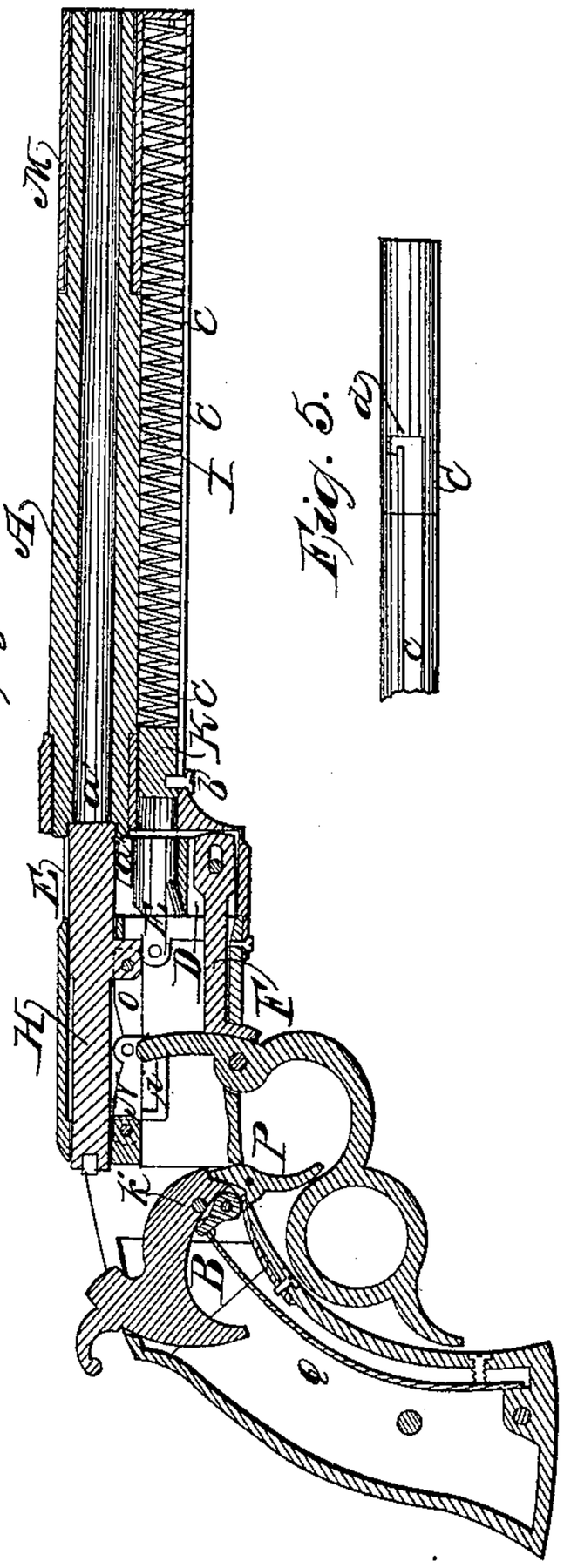

Fig. 5.

UNITED STATES PATENT OFFICE.

H. SMITH AND DANIEL B. WESSON, OF NORWICH, CONNECTICUT.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. **10,535**, dated February 14, 1854.

To all whom it may concern:

Be it known that we, HORACE SMITH and DANIEL B. WESSON, of Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Guns, Pistols, or Fire-Arms; and we do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a top view, Fig. 2 a side view, and Fig. 3 a vertical and central section, of one of our improved fire-arms or pistols. Fig. 4 is a side view of the kind of cartridge to be used therein, it being the same as is used in that species of pistols usually termed the "Saloon pistol," it being, as we believe, a French invention. This cartridge has its case of thin copper, and with a projecting bottom that contains the percussion-powder, the ball being inserted in the other end or top of the case.

In the drawings above referred to, A denotes the barrel of the piece, and B the stock or lock-case. Underneath the barrel is a long tube, C, that serves as a magazine for carrying the cartridges. This magazine and the barrel have at their rear ends a carrier or slide-block, D, whose office is to receive a cartridge from the magazine and transfer it or raise it up into line with the barrel. For this purpose the said carrier is caused to slide up and down within a chamber, E, and to be moved by a lever, F, that plays or turns on a fulcrum, *a*, with the trigger-guard G, which is also a lever, and made to turn on the same pin *a*. A piston-slide, H, is also employed to force the cartridge out of the carrier (when the latter is raised to its highest position) and into the barrel. The cartridges are placed one after the other in the magazine, and are pressed toward the carrier by means of a helical spring, I, that bears against a cylindric slider, K, from which a screw-pin, *b*, projects and extends into and through a long slot, *c*, that is made lengthwise in the magazine, and opens into another and short slot, *d*, that is cut through a spring chamber or tube, L, which is so applied to the barrel by means of a clasping-tube, M, as to be capable of being turned laterally entirely out of line with the magazine, so as to permit the latter to be supplied with cartridges whenever necessary. The slot *d* of the spring-chamber is turned at its upper end a short distance at right angles to its main part. Thence it is turned down a short distance parallel to such main part, the whole being as represent d in Fig. 5, and for the purpose of confining the spring within the chamber in a contracted state. By applying the finger to the head of the screw *b* and pushing the slider K toward the spring I, we can crowd the spring entirely into the chamber L, and so as to carry the screw *b* to the upper part of the slot *d*. When this is the case, if we press the screw laterally into the bent part of the groove, the spring may be preserved in place in the chamber while such chamber is turned out of line with the magazine-tube.

The piston-slide H is operated or moved back and forth by toggle-joints N O, that are worked by the trigger-guard G, the position of the several parts of the fire-arm, when the lower arm of the trigger-guard is moved entirely forward or away from the stock, being represented in Fig. 6, which exhibits a longitudinal section of the pistol under such circumstances. The toggles are jointed to the slide H and the lock or stock frame. They are moved up and down by an arm, *k*, projecting upward from the trigger-guard, and provided with one or more studs to enter and slide in a slot, *i*, formed through or affixed to the back toggle.

When the toggles are brought into a straight line with each other, the piston-slide H is moved hard up against the rear end of the cartridge, and serves as a breech to the barrel.

Fig. 9 denotes a top view of the piston-slide H. Fig. 10 is a horizontal and central section of it. The front end of the said slide is formed with dovetail projections or a recess, *a'*, which flares or is made wider as it descends, as seen at *r r*. This dovetail or recess is for the purpose of withdrawing from the barrel, after a discharge, the metal of the cartridge. The forward pressure of the piston-slide and the blow of the hammer against it force the metal of the cartridge into the recess or dovetail of the piston-slide, and so as to cause it (the slide) to grasp it (the cartridge) with sufficient power to enable it to be

drawn out of the barrel when the piston-slide is next retracted. Having withdrawn the cartridge from the barrel and over the carrier, projections a^2 a^2 (see Figs. 1, 3, and 6) on the carrier are forced in contact with it (the cartridge) by and during the next upward movement of the carrier, and expel it from the piece or fire-arm.

The cock or percussion-hammer is arranged in rear of the piston and breech-slide H, and turns on a pin, k', and is made to strike directly against the rear end of the slide H, and to inflame the priming by the concussion produced by its percussion or blow on such end. The trigger is shown at P and the mainspring at Q. This cock or percussion-hammer is also so arranged that it shall be elevated or set to full-cock by the back-pressure on it of the slide H, induced by the toggles and the trigger-guard, when the latter is moved away from the stock. Thus the trigger-guard, when so moved, is made to simultaneously cause the hammer to be cocked, the piston-slide to be forced back, and the carrier to be elevated.

The carrier-lever is elevated by the lower arm of the trigger-guard lever, and depressed by the upper arm thereof, the said carrier-lever being so shaped, as seen in Figs. 7 and 8, (which are side and top views of it,) and applied to the trigger-guard lever as to enable the latter to actuate it.

We do not claim the employment of a carrier or slide for transferring the cartridge from the magazine to the barrel, nor the employment in combination therewith of a piston or slide to force the cartridge out of the carrier and into the barrel; nor do we claim the employment of a piston-slide, H, as a breech to the barrel, nor the firing by concussion instead of percussion, nor do we claim the improvement of making or applying the pecussion-hammer so as to strike on the rear end of such piston-slide, (instead of directly against the cartridge or its priming,) and so that the priming at the front end of the slide shall be exploded by concussion produced by the percussion or blow of the hammer on the other end of it, as hereinbefore specified; but

We do claim—

1. The arrangement and application of the percussion-hammer, with respect to the breech-slide H and the trigger-guard lever, so that the hammer may be moved and set to full-cock by the pressure or back action of the slide induced by the action of the trigger-guard lever, as specified.

2. We also claim the improvement of making the front end of the piston-slide with a dove-tailed recess, a^1, or its equivalent, for the purpose of enabling the slide to seize the metal of the cartridge, as above explained, and so that the refuse metal or cartridge may be withdrawn from the barrel by the piston-slide when next retracted, and discharged by the upward movement of the carrier, all substantially as specified.

In testimony whereof we have hereto set our signatures this 24th day of May, A. D. 1853.

HORACE SMITH.
DANIEL B. WESSON.

Witnesses:
H. H. STARKWEATHER,
E. S. CRUTTENDEN.